

**Fig. 1**

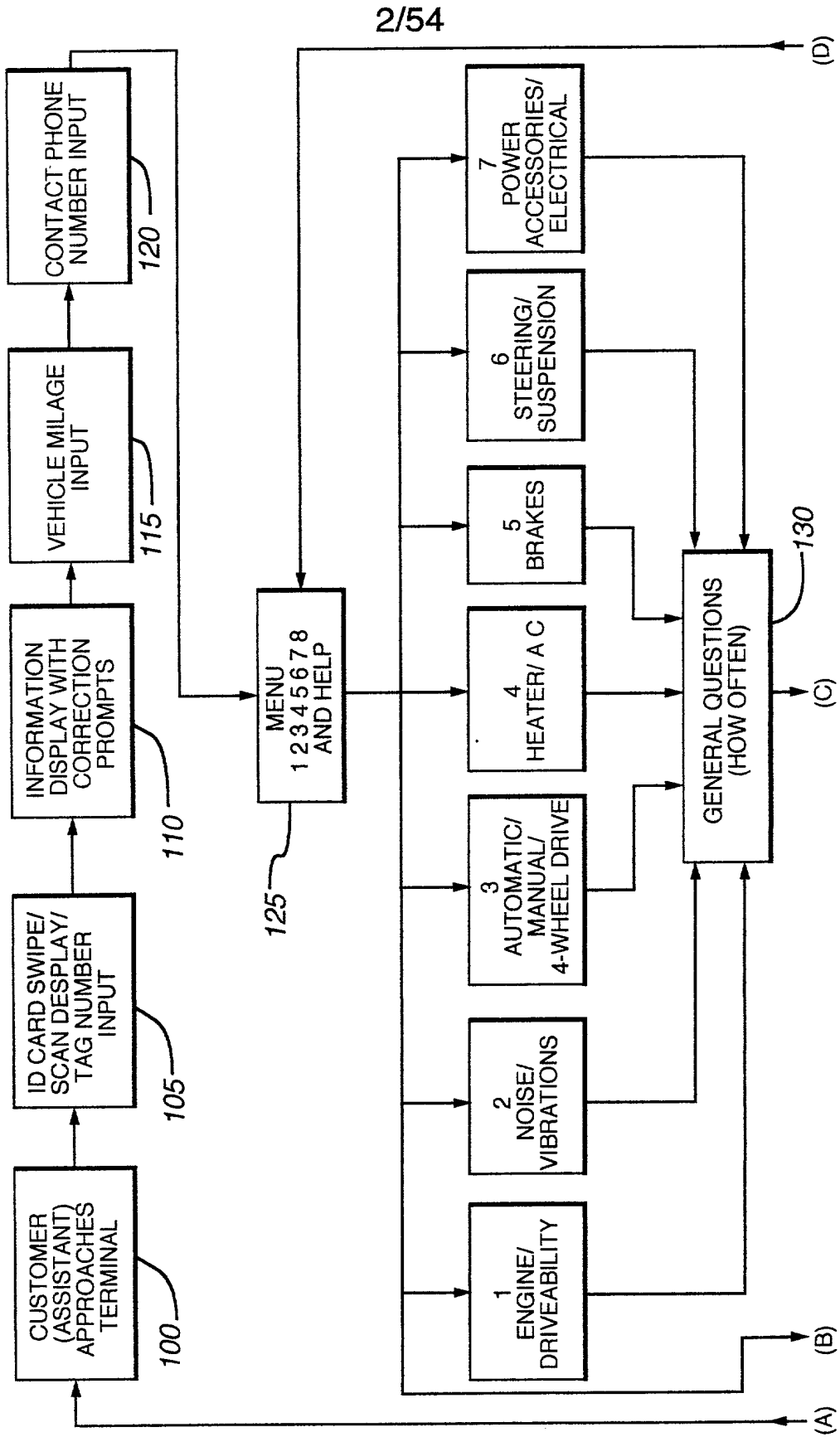
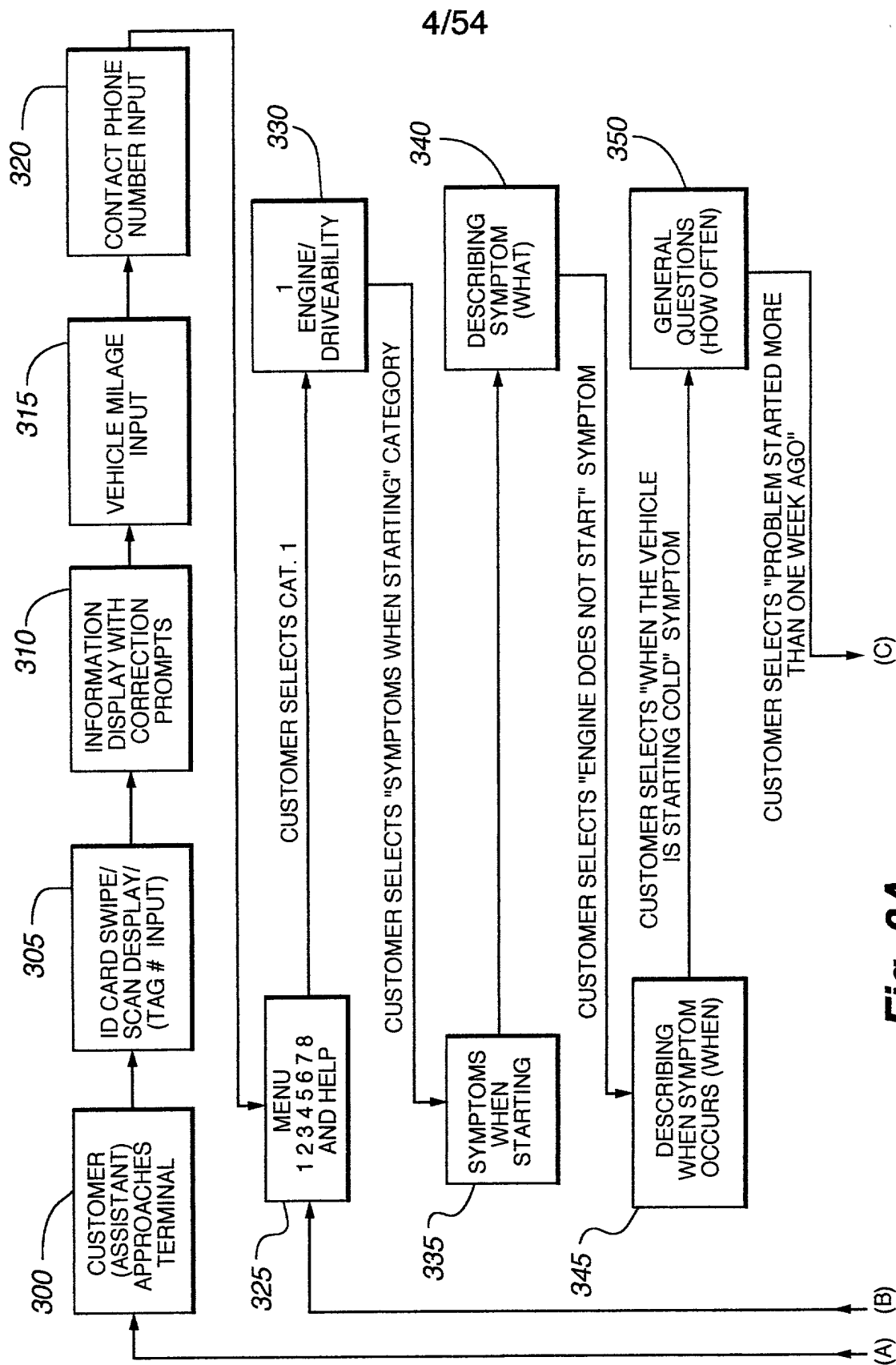


Fig. 2A





**Fig. 3A**

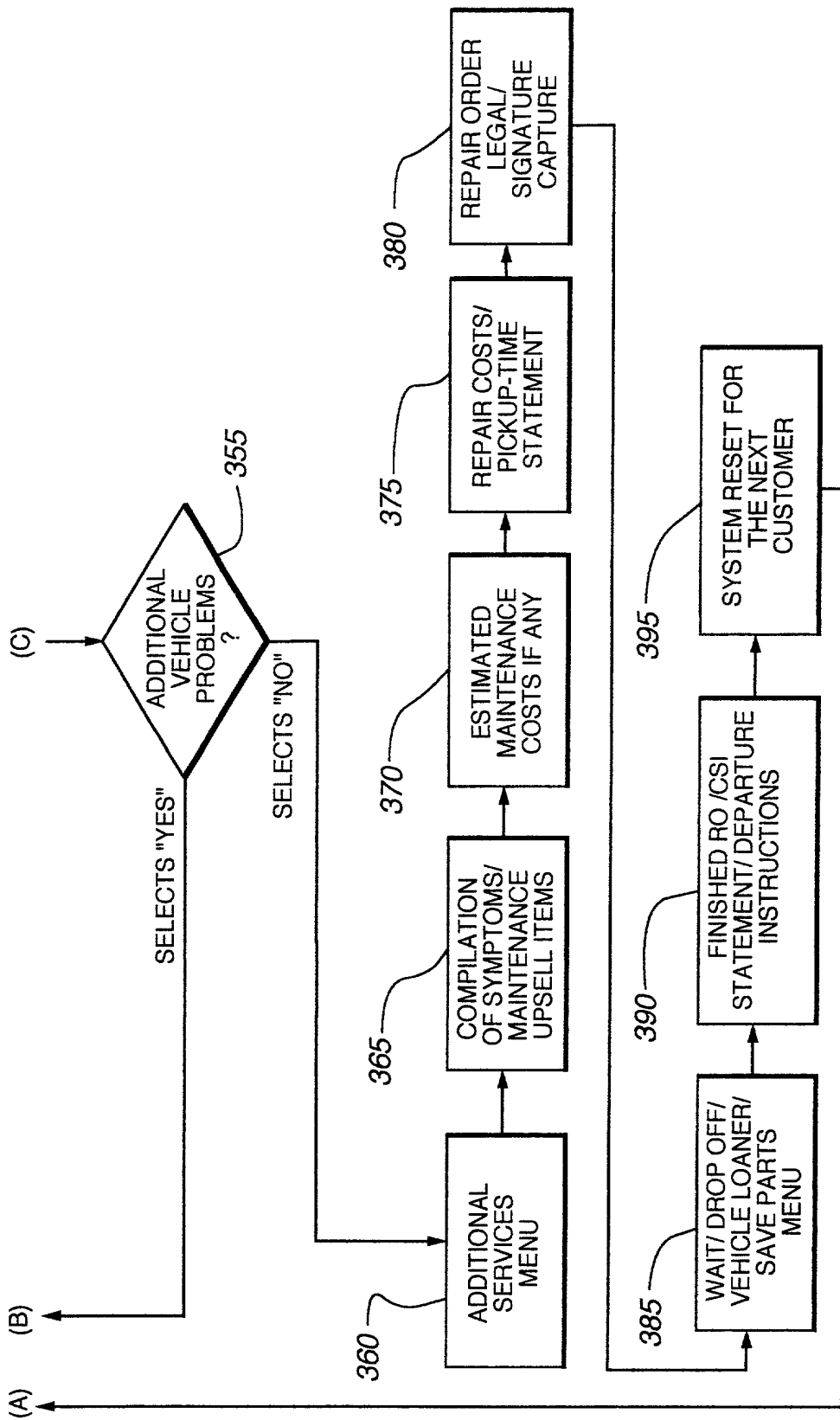
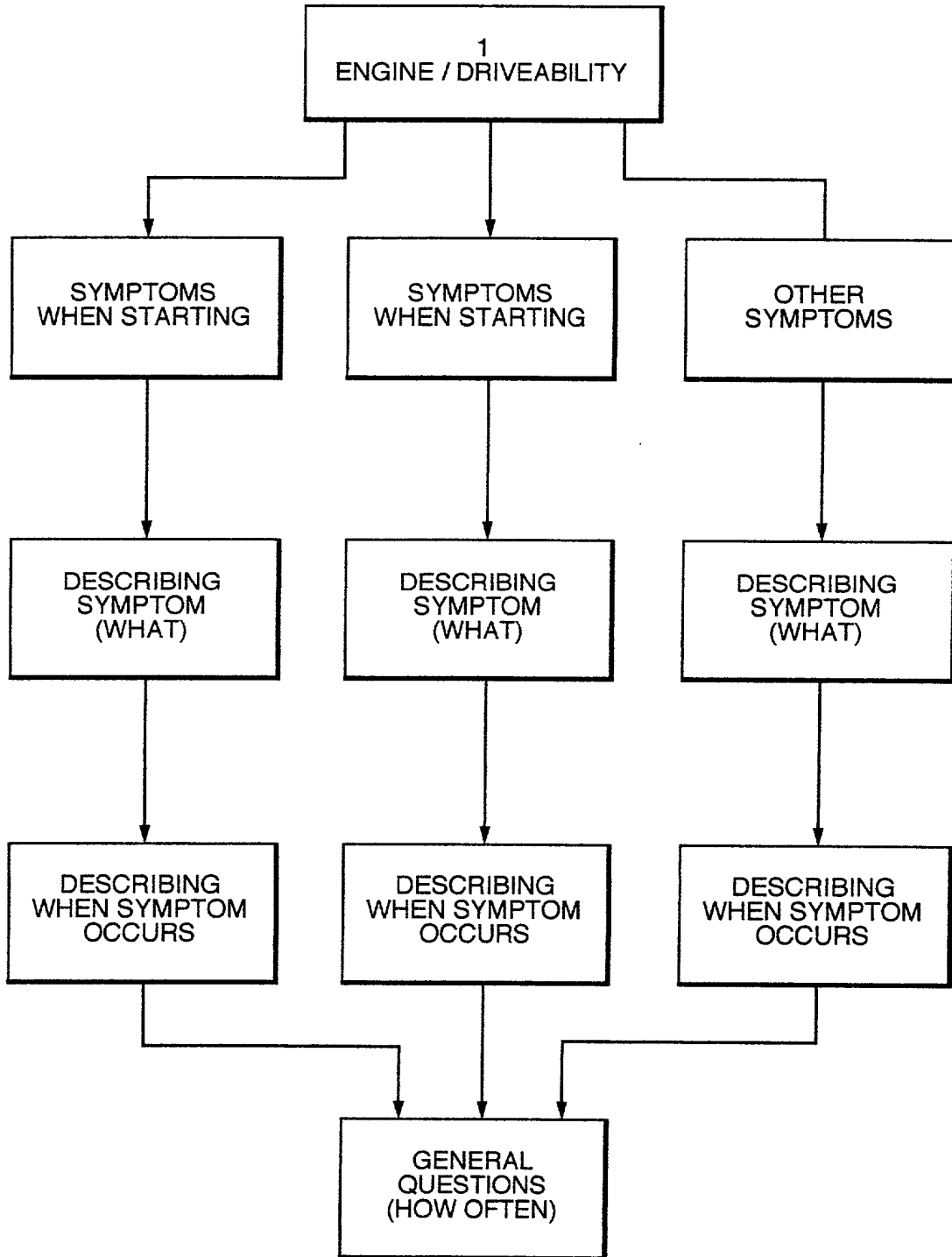
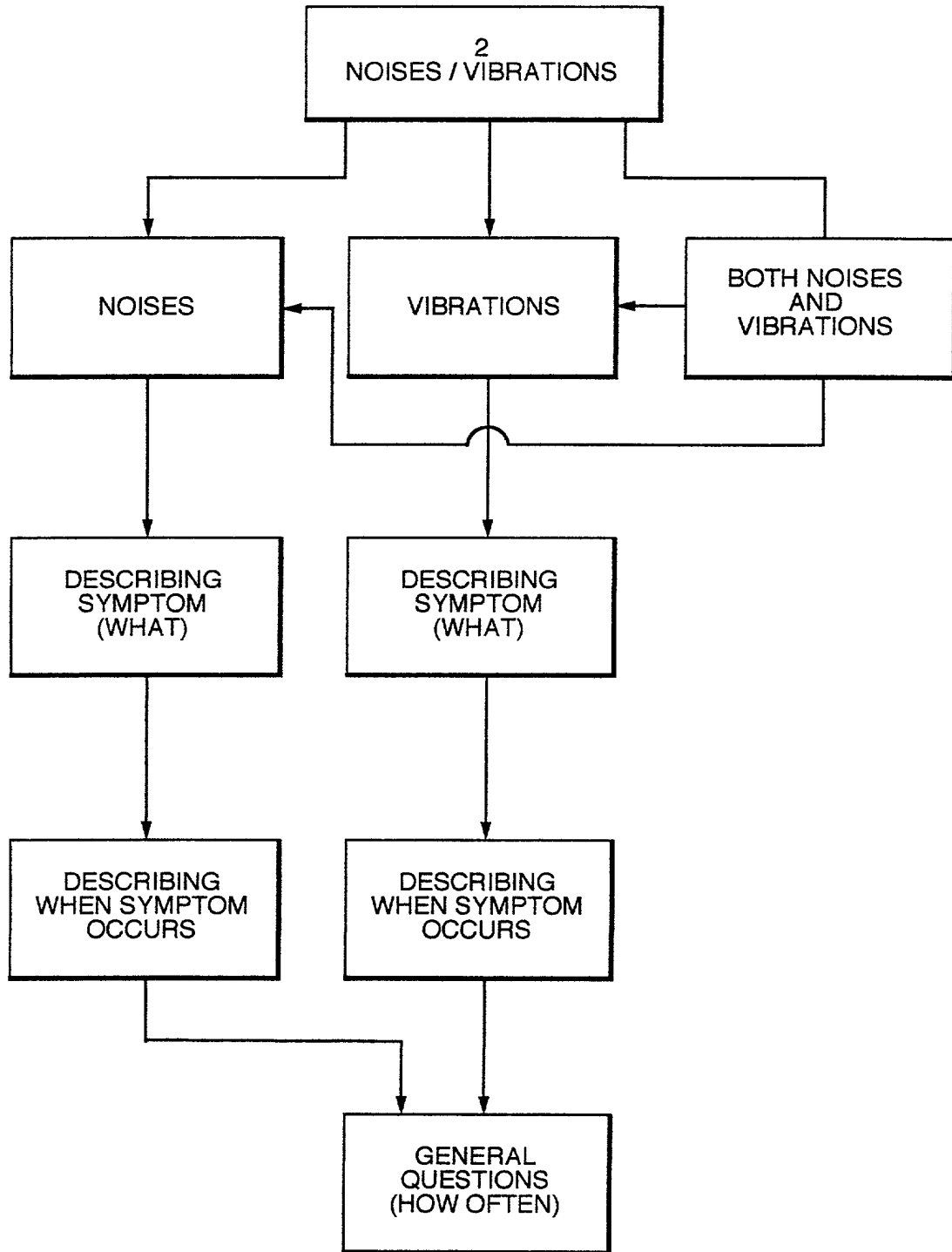


Fig. 3B

**Fig. 4**

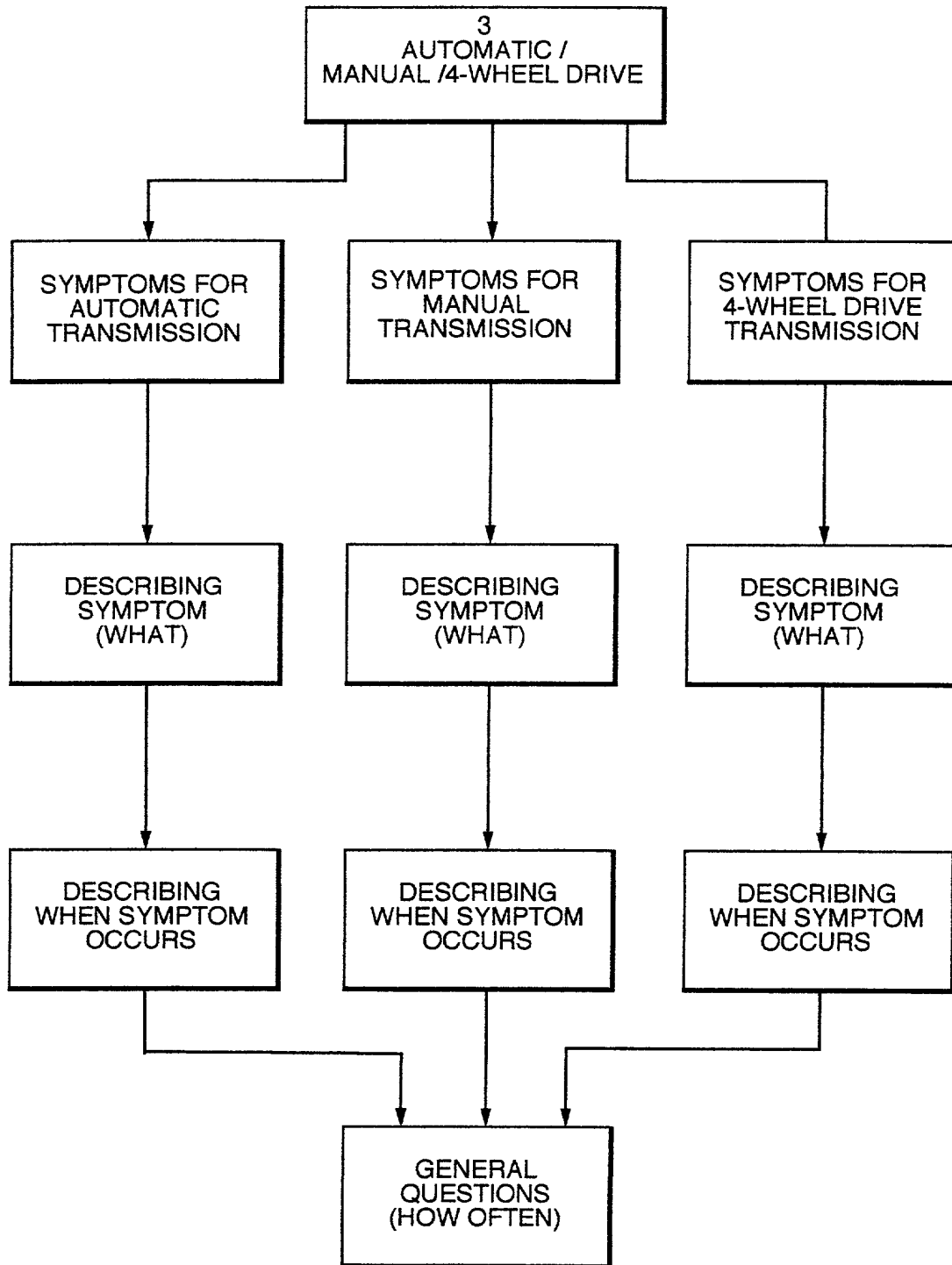
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**Fig. 5**

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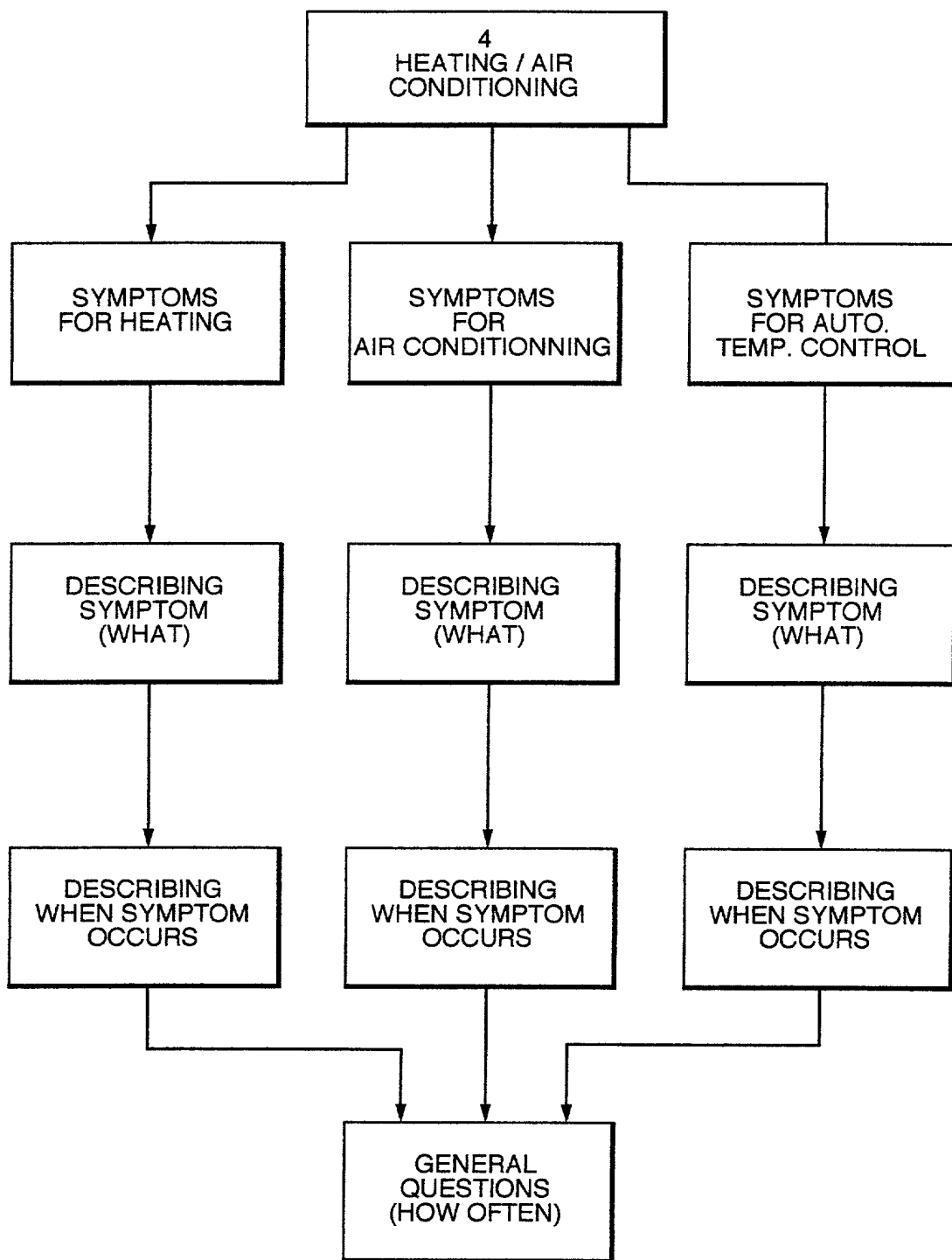


**Fig. 6**



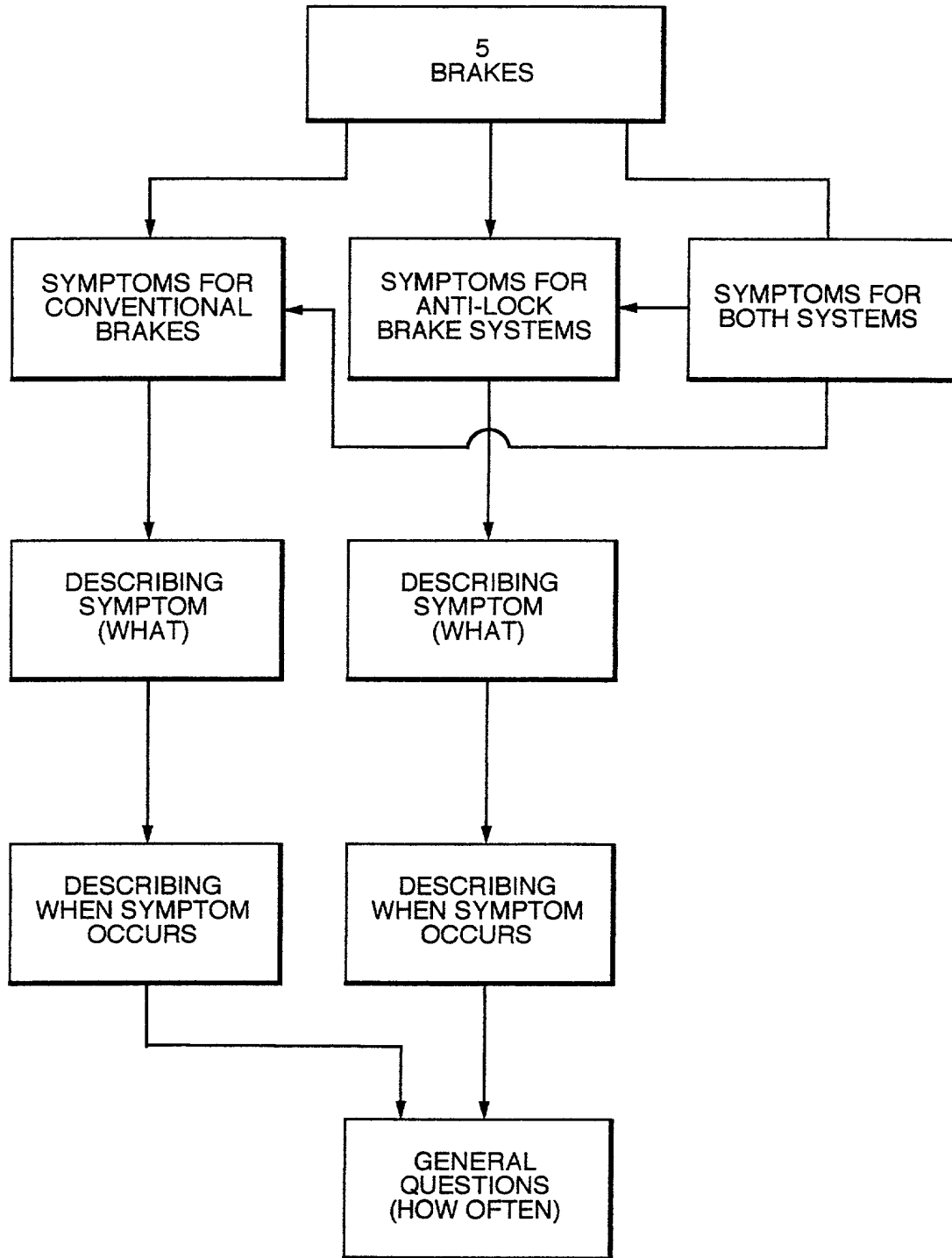
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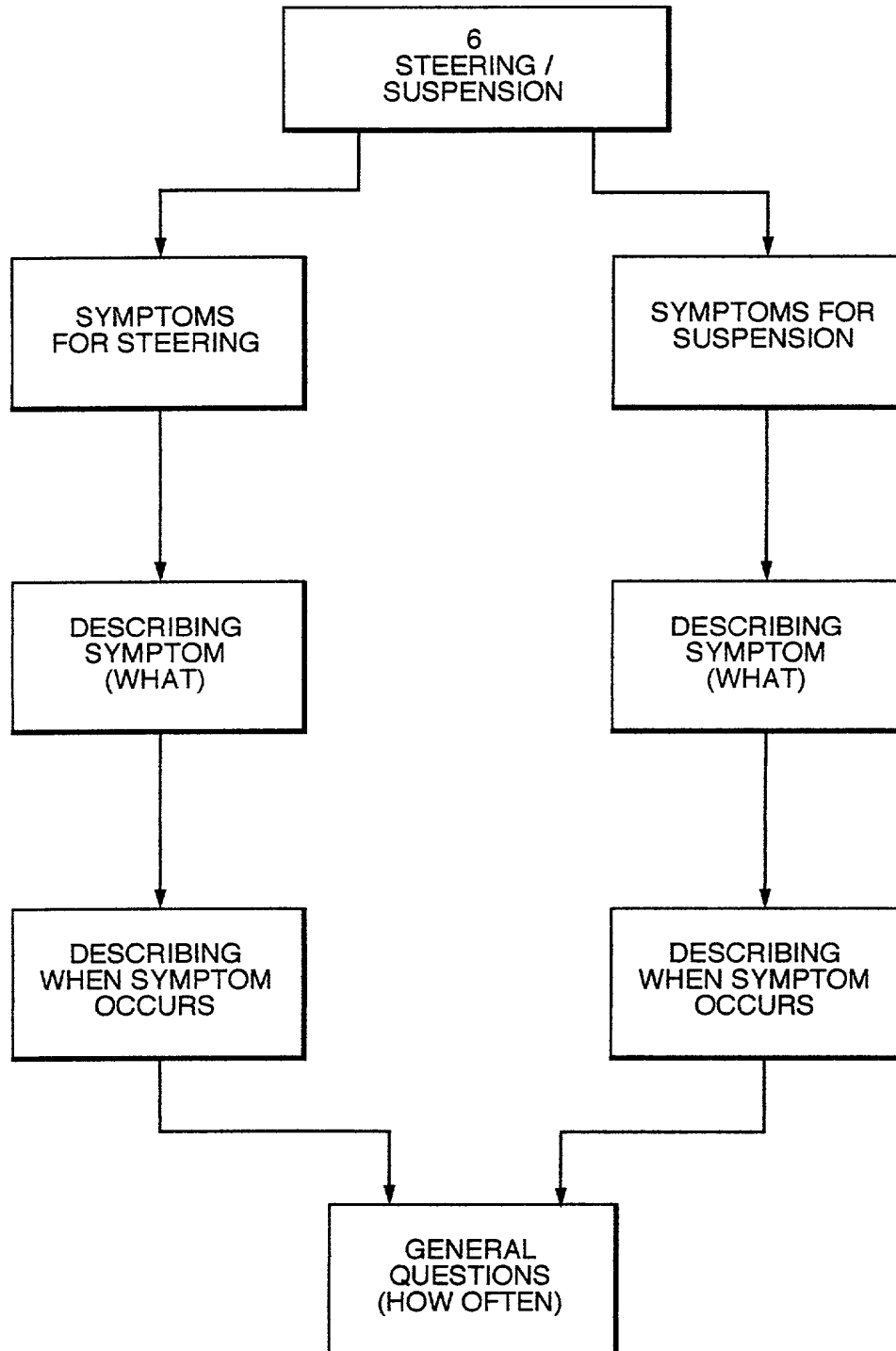
**Fig. 7**

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**Fig. 8**

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**Fig. 9**



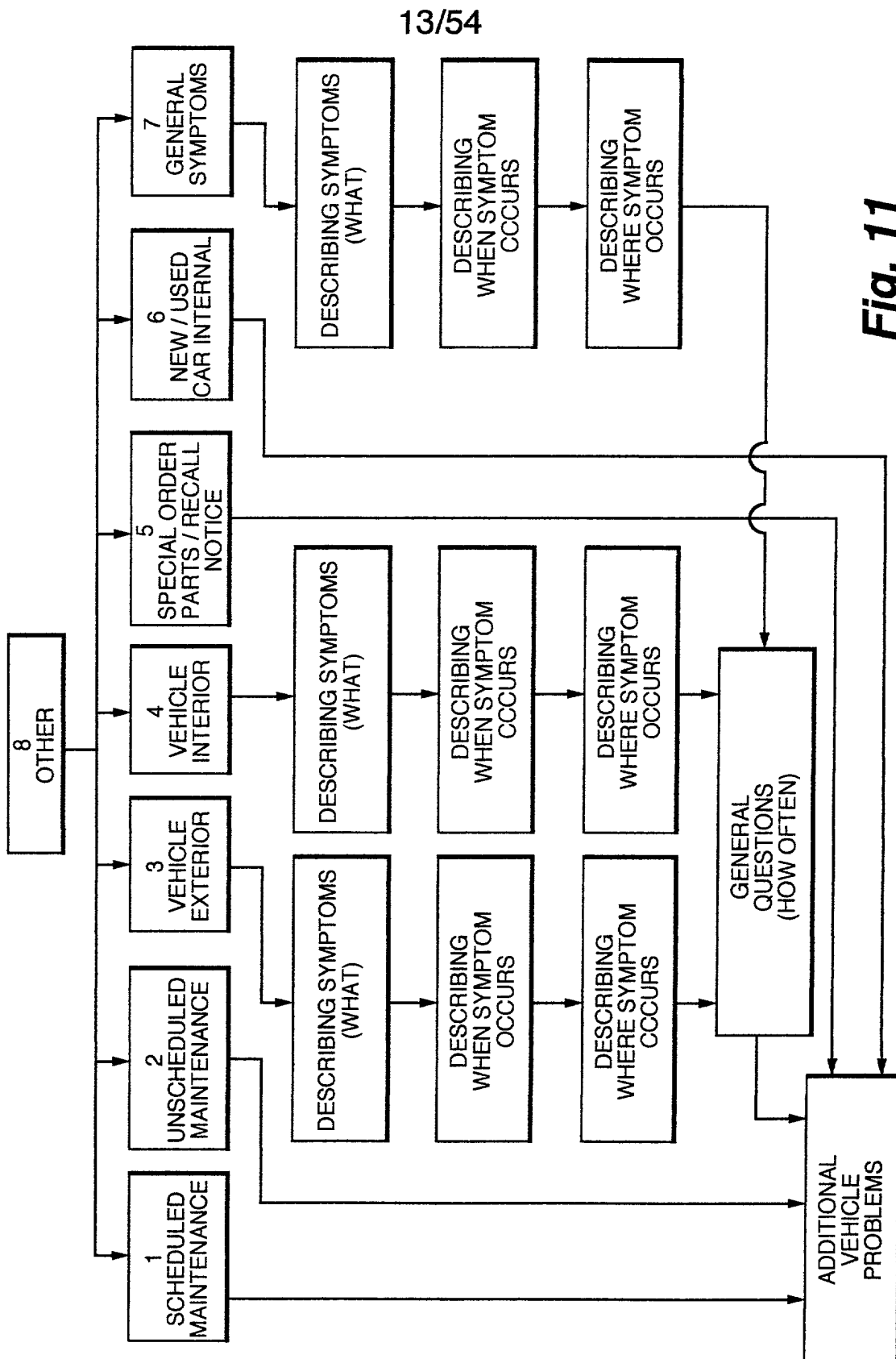


Fig. 11

SCAN VEHICLE AND TAG: \_\_\_\_\_

ENTER TAG #  
440

C

<

1

2

3

4

5

6

7

8

9

0

DONE

EXIT

OK

Fig. 12B

SCAN VEHICLE AND TAG: \_\_\_\_\_

VEHICLE DATA:  
VEHICLE ID: \_\_\_\_\_  
TAG NUMBER:  
ENTER TAG # \_\_\_\_\_

EXIT

OK

Fig. 12A

CUSTOMER'S INFORMATION:

CUSTOMER INFORMATION:

JOHN DOE

CHANGE

1234 HIS WAY ST.

CHANGE

ANYTOWN, USA 12345

CHANGE

CITY, STATE, ZIP:

ANYTOWN, USA 12345

<

1234567890-

QWERTYUIOP

ASDFGHJKL

ZXCVBNM.,

CLEAR

SPACE

DONE

Fig. 12C

CUSTOMER'S INFORMATION:

CUSTOMER INFORMATION:

JOHN DOE

CHANGE

1234 HIS WAY ST.

CHANGE

ANYTOWN, USA 12345

CHANGE

CUSTOMER VEHICLE

VEHICLE LICENSE #:

CHANGE

BRT-1234

▼

VEHICLE DESCRIPTION:

DODGE RAM 350, FORREST GREEN, 2001

▼

OK

BACK

Fig. 12D

ENTER VEHICLR MILAGE:

VEHICLE MILAGE:

CHANGE

DONE

BACK

HELP

Fig. 12E

ENTER VEHICLR MILAGE:

ENTER MILAGE:

C

<

1

2

3

4

5

6

7

8

9

0

DONE

VEHIC

CH

DONE

BACK

HELP

Fig. 12F



MAIN MENU

PLEASE INDICATE THE GENERAL AREA IN WHICH THE PROBLEM IS OCCURRING. IF YOUR VEHICLE REQUIRES ONLY MAINTENANCE SERVICE, AND THERE ARE NO PROBLEMS AT THE PRESENT TIME PLEASE PRESS NUMBER EIGHT ON THE SERVICE MENU. IF YOUR PROBLEM OR REQUEST DOES NOT FALL WITHIN THE CATEGORIES LISTED, PRESS NUMBER EIGHT.

TOUCH THE AREA OR AREAS BELOW, THEN TOUCH DONE.

☐ 1. ENGINE / DRIVEABILITY

☐ 2. NOISES / VIBRATIONS

☐ 3. AUTOMATIC / MANUAL / 4 WHEEL DRIVE TRANSMISSION

☐ 4. HEATER / AIR CONDITIONING

☐ 5. BRAKES

☐ 6. STEERING / SUSPENSION

☐ 7. POWER ACCESSORIES / ELECTRICAL

☐ 8. OTHER SERVICES

DONE

HELP

Fig. 13

ENTER CONTACT PHONE NUMBERS:

WELCOME TO THE JACK'S BMW. THIS SERVICE EXPRESS WRITER IS DESIGNED TO LESSEN YOUR TIME WAITING FOR SERVICE. AT THE SAME TIME IT INCREASES THE ACCURACY OF THE DESCRIPTION OF YOUR PROBLEM GIVEN TO THE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. WE HOPE YOU ENJOY THE EXPERIENCE.

PLEASE ENTER THE PHONE NUMBER(S) WHERE YOU CAN BE REACHED AT TODAY

PHONE NUMBERS:

CHANGE

(303)333-4444

CHANGE

(303)333-4444

DONE

BACK

HELP

Fig. 12G

**ENGINE / DRIVEABILITY SECTION**

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. SYMPTOMS WHEN STARTING  
2. SYMPTOMS WHEN DRIVING  
3. OTHER SYMPTOMS

1 2 3 BACK HELP

**SYMPTOMS WHEN STARTING:**

TOUCH THE APPROPRIATE SYMPTOM OR SYMPTOMS BELOW.

☐ DOES NOT TURN OVER

☐ TURNS OVER, BUT DOES NOT START.

☐ TURNS OVER SLOWLY.

☐ TURNS OVER PROPERLY, BUT STARTS HARD.

☐ TAKES TOO LONG BEFORE IT STARTS.

☐ I MUST PRESS THE GAS PEDAL HARD TO MAKE THE ENGINE START.

☐ STARTS OK, BUT THAN STALLS.

☐ NONE OF THE ABOVE STARTING SYMPTOMS.

OK BACK HELP

Fig. 14A

Fig. 14B

WHEN DO YOU NOTICE IT:  
WHEN DO YOU NOTICE THE SYMPTOMS? TOUCH  
THE APPROPRIATE BOX OR BOXES.

WHEN THE ENGINE TEMPERATURE SHOWS:  

☐ COLD ☒ NORMAL ☐ HOT ☐ ANY TEMP

WHEN THE ENGINE'S RPM SHOWS:  

☐ BELOW 1000 ☐ 1000 TO 2000 ☐ 2000 TO 4000  
☐ OVER 4000 RPM ☒ NOT APPLICABLE

WHEN THE VEHICLE IS:  

☐ WARMING UP ☐ STARTING COLD  
☐ RESTARTING HOT ☒ NOT APPLICABLE

DOES THE "CHECK ENGINE" LIGHT COME ON:  

☐ YES ☒ NO

THE SYMPTOMS OCCURE WHEN MY VEHICLE'S  
SPEED IS (MPH)  

☐ 0 TO 20 ☐ 20 TO 35 ☐ 35 TO 55  
☐ OVER 55 MPH ☒ DOESN'T MATTER

THE SYMPTOM OCCURES WHEN I DRIVE FOR:  

☐ UNDER 5 MILES ☐ 5 TO 10 MILES  
☐ OVER 10 MILES ☒ DOESN'T MATTER

OK

BACK

HELP

Fig. 14C

SYMPTOMS WHEN DRIVING:  
TOUCH THE APPROPRIATE SYMPTOM OR  
SYMPTOMS BELOW.

☐ HESITATES OR STALLS WHEN SPEEDING UP.  
☐ STALLS WHEN I SLOW DOWN OR STOP.  
☐ STALLS WHEN TURNING RIGHT OR LEFT.  
☐ LACKS POWER AT HIGHWAY SPEED.  
☐ LACKS POWER BELOW HIGHWAY (CITY) SPEEDS.  
☐ ENGINE BACKFIRES ( LOUD POPPING NOISE)  
ENGINE KEEPS RUNNING WHEN IGNITION  
KEY IS OFF.  
☐ SPEEDS UP OR SLOWS DOWN UNEXPECTEDLY.  
☐ POOR FUEL ECONOMY.

☐ NONE OF THE ABOVE DRIVING SYMPTOMS.

OK

BACK

HELP

Fig. 14D

NOISE OR VIBRATION SELECTION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM.

1. NOISES-WHAT YOU CAN HEAR.

2. VIBRATIONS-WHAT YOU CAN FEEL.

3. BOTH NOISES AND VIBRATIONS.

1

2

3

BACK

HELP

NOISE INFORMATION:

LISTED BELOW ARE EXAMPLES OF NOISES COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBES THE NOISES YOU ARE HEARING.

☐ SQUEAK

☐ RATTLE

☐ WHISTLE

☐ HUM

☐ BUZZ

☐ CHIRP

☐ SQUEAL

☐ CLUNK

☐ TAP

☐ CLICK

☐ GRIND

☐ GROWL

☐ KNOCK

☐ METAL CLANG

☐ RUMBLE

☐ NONE OF THE ABOVE

OK

BACK

HELP

Fig. 15B

NOISE OR VIBRATION SELECTION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM.

1. NOISES-WHAT YOU CAN HEAR.

2. VIBRATIONS-WHAT YOU CAN FEEL.

3. BOTH NOISES AND VIBRATIONS.

1

2

3

BACK

HELP

NOISE INFORMATION:

LISTED BELOW ARE EXAMPLES OF NOISES COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBES THE NOISES YOU ARE HEARING.

☐ SQUEAK

☐ RATTLE

☐ WHISTLE

☐ HUM

☐ BUZZ

☐ CHIRP

☐ SQUEAL

☐ CLUNK

☐ TAP

☐ CLICK

☐ GRIND

☐ GROWL

☐ KNOCK

☐ METAL CLANG

☐ RUMBLE

☐ NONE OF THE ABOVE

OK

BACK

HELP

Fig. 15A

WHERE IS IT COMMING FROM:  
PLEASE INDICATE THE APPROPRIATE AREA THE NOISE AND/ OR VIBRATION SEEMS TO COME FROM. TOUCH THE LOCATION OF THE PROBLEM ON THE APPROPRIATE ILLUSTRATION.

INSIDE THE VEHICLE

RIGHT SIDE (PASSENGER)

LEFT SIDE (DRIVER)

CLEAR DOT

UNDER THE VEHICLE

RIGHT SIDE (PASSENGER)

LEFT SIDE (DRIVER)

CLEAR DOT

CLEAR DOT

OK

BACK

HELP

WHEN DOES IT HAPPEN:  
WHEN DO YOU NOTICE THE NOISE AND / VIBRATION. PLEASE ANSWER THE QUESTIONS BY TOUCHING THE APPROPRIATE BOX OR BOXES WITH THE PROVIDED PEN.

IT OCCURES WHEN THE VEHICLE IS:  

MOVING

NOT MOVING

BOTH

MOST LIKELY OCCURES WHEN I AM:  

PRESSING HARD ON THE GAS PEDAL.

PRESSING MEDIUM TO LIGHT ON THE GAS PEDAL.

DRIVING, LETTING UP ON THE GAS.

CRUSING AT A CONSTANT SPEED.

BREAKING HARD.

TURNING LEFT.

TURNING RIGHT.

NON OF THE ABOVE.

AT WHAT SPEED (MPH):  

0 TO 5

5 TO 20

20 TO 45

45 TO 55

OVER 55 MPH

DOESN'T MATTER

ON WHAT KINDS OF ROADS:  

SMOOTH PAVED

POTHOLES

DIRT

WET OR SNOW COVERED PAVED

DOESN'T MATTER

ROUGH PAVED

OK

BACK

HELP

Fig. 15D

WHERE IS IT COMMING FROM:  
PLEASE INDICATE THE APPROPRIATE AREA THE NOISE AND/ OR VIBRATION SEEMS TO COME FROM. TOUCH THE LOCATION OF THE PROBLEM ON THE APPROPRIATE ILLUSTRATION.

INSIDE THE VEHICLE

RIGHT SIDE (PASSENGER)

LEFT SIDE (DRIVER)

CLEAR DOT

UNDER THE VEHICLE

RIGHT SIDE (PASSENGER)

LEFT SIDE (DRIVER)

CLEAR DOT

CLEAR DOT

OK

BACK

HELP

WHEN DOES IT HAPPEN:  
WHEN DO YOU NOTICE THE NOISE AND / VIBRATION. PLEASE ANSWER THE QUESTIONS BY TOUCHING THE APPROPRIATE BOX OR BOXES WITH THE PROVIDED PEN.

IT OCCURES WHEN THE VEHICLE IS:  

MOVING

NOT MOVING

BOTH

MOST LIKELY OCCURES WHEN I AM:  

PRESSING HARD ON THE GAS PEDAL.

PRESSING MEDIUM TO LIGHT ON THE GAS PEDAL.

DRIVING, LETTING UP ON THE GAS.

CRUSING AT A CONSTANT SPEED.

BREAKING HARD.

TURNING LEFT.

TURNING RIGHT.

NON OF THE ABOVE.

AT WHAT SPEED (MPH):  

0 TO 5

5 TO 20

20 TO 45

45 TO 55

OVER 55 MPH

DOESN'T MATTER

ON WHAT KINDS OF ROADS:  

SMOOTH PAVED

POTHOLES

DIRT

WET OR SNOW COVERED PAVED

DOESN'T MATTER

ROUGH PAVED

OK

BACK

HELP

Fig. 15C

**VIBRATION INFORMATION:**

LISTED BELOW ARE EXAMPLES OF VIBRATIONS COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBES THE VIBRATIONS YOU ARE FEELING.

☐ SHAKING

☐ THUMPING

☐ TREMBLING

☐ BOOM

☐ BUZZING

☐ CLUNK

☐ CHATTER

☐ SHUDDER

☐ PULSATION

☐ MOAN

☐ ROUGHNESS

☐ TINGLING

☐ RUMBLE

☐ SHIMMY

☐ NONE OF THE ABOVE

OK

BACK

HELP

**TRANSMISSION INFORMATION:**

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. AUTOMATIC TRANSMISSION

2. MANUAL TRANSMISSION

3. FOUR WHEEL DRIVE

1

2

3

BACK

HELP

Fig. 15E

Fig. 16A

**AUTOMATIC TRANSMISSION:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ DOESN'T SHIFT UP.
- ☐ DOESN'T SHIFT DOWN.
- ☐ DELAYS ENGAGEMENT IN FORWARD GEAR.
- ☐ DELAYS ENGAGEMENT IN REVERSE GEAR.
- ☐ SHIFT IS ROUGH OR HARSH.
- ☐ SHIFT IS SLOW-SEEMS TO SLIP.
- ☐ SHIFT IS TOO EARLY.
- ☐ ENGINE RACES OR INCREASES RPM WHEN SHIFTING.
- ☐ TRANSMISSION MAKES UNUSUAL NOISES.
- ☐ OIL OR FLUID LEAK COMING FROM TRANSMISSION.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK BACK HELP

**Fig. 16B**

**MANUAL TRANSMISSION:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ DOESN'T GO INTO ANY GEAR
- ☐ CLUTCH SEEMS TO SLIP GOING INTO GEAR.
- ☐ CHATTERS GOING INTO GEAR.
- ☐ MAKES A GRINDING NOISE GOING INTO GEAR
- ☐ CLUTCH SEEMS HARD TO DEPRESS.
- ☐ CLUTCH SEEMS SOFT TO DEPRESS.
- ☐ CLUTCH PEDAL ENGAGES TO HIGH.
- ☐ CLUTCH PEDAL ENGAGES TOO LOW.
- ☐ POPS OUT OF GEAR.
- ☐ OIL OR FLUID LEAKING FROM TRANSMISSION.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK BACK HELP

**Fig. 16C**

FOUR WHEEL DRIVE:  
TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

DOESN'T SHIFT INTO 4WD HI

DOESN'T SHIFT INTO 4WD LOW.

MAKES A GRINDING NOISE GOING INTO 4WD.

4WD LIGHT DOESN'T COME ON.

4WD FRONT HUBS DON'T ENGAGE.

HARD TO TAKE OUT OF 4WD.

NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

WHEN DOES IT HAPPEN:  
WHEN DO YOU NOTICE THE SYMPTOM(S).  
TOUCH THE APPROPRIATE BOX OR BOXES BELOW.  
IN WHAT GEAR DOES THE SYMPTOM SHOW:

AUTOMATIC TRANSMISSION:  

OPARK

OREVERSE

ONEUTRAL

OOD

OD

O2

O1

ANY GEAR.

MANUAL TRANSMISSION:  

O1

O2

O3

O4

O5

O6

NEUTRAL

ANY GEAR

THE SYSTEM SHOWS WHEN THE VEHICLE IS:  

ACCELERATING

STANDING STILL

BRAKING

TURNING

SLOWING DOWN

DRIVING UPHILL

THE SYMPTOM OCCURS WHEN I DRIVE FOR:  

UNDER 5 MILES

5 TO 10 MILES

OVER 10 MILES

MY VEHICLE'S ENGINE TEMPERATURE READS:  

COLD

NORMAL

HOT

OK

BACK

HELP

Fig. 16E

Fig. 16D



HEATER / AIR CONDITIONING:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. HEATING SYSTEM.

2. AIR CONDITIONING SYSTEM.

3. AUTO TEMPERATURE CONTROL SYSTEM.

1

2

3

BACK

HELP

HEATING SYSTEMS:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

☐ TEMPERATURE CONTROL SELECTOR IS HARD TO MOVE.

☐ VENT CONTROL SELECTOR IS HARD TO MOVE.

☐ DOESN'T DELIVER HOT AIR.

☐ TAKES TOO LONG TO DELIVER HOT AIR.

☐ DEFROST INOPERABLE OR FOGS UP.

☐ ENGINE TRMPTURE GUAGE DOESN'T MOVE OFF OF COLD.

☐ UNUSUAL ODORS WHEN OPERATING.

☐ AIR DOESN'T FLOW FROM ALL OUTLETS PROPERLY.

☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 17B

HEATER / AIR CONDITIONING:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. HEATING SYSTEM.

2. AIR CONDITIONING SYSTEM.

3. AUTO TEMPERATURE CONTROL SYSTEM.

1

2

3

BACK

HELP

Fig. 17A

**AIR CONDITIONING SYSTEMS:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ TEMPERATURE CONTROL SELECTOR IS HARD TO MOVE.
- ☐ VENT CONTROL SELECTOR IS HARD TO MOVE.
- ☐ DOESN'T DELIVER COLD AIR.
- ☐ TAKES TOO LONG TO DELIVER COLD AIR.
- ☐ TEMPERATURE CHANGES UNEXPECTEDLY.
- ☐ UNUSUAL ODORS WHEN OPERATING.
- ☐ DOESN'T FLOW FROM ALL OUTLETS PROPERLY.
- ☐ A/C COMPRESSOR SEEMS TO CYCLE TOO OFTEN.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK BACK HELP

**Fig. 17C**

**AUTOMATIC TEMPERATURE CONTROL SYSTEM:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ TEMPERATURE READING IS INACCURATE.
- ☐ BUTTONS ON THE CONTROL UNIT ARE INOPERABLE.
- ☐ TAKES TOO LONG TO DELIVER ACCURATE TEMPERATURE.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK BACK HELP

**Fig. 17D**

**WHEN DOES IT HAPPEN:** \_\_\_\_\_  
 WHEN DO YOU NOTICE THE SYMPTOM(S).  
 TOUCH THE APPROPRIATE BOX OR BOXES BELOW.

**WHEN THE SELECTOR CONTROL IS:** \_\_\_\_\_  
☐ FLOOR ☐ MIX ☐ VENT ☐ DEFROST  
☒ DOESN'T MATTER

**WHEN THE TEMPERATURE CONTROL IS:** \_\_\_\_\_  
☐ COOL ☐ WARM ☐ NORMAL A/C ☐ MAX A/C  
☐ DEFROST ☒ DOESN'T MATTER

**WHEN I AM MOVING THE SELECTOR OR  
 CHANGING THE TEMPERATURE:** \_\_\_\_\_  
☐ YES ☒ NO

**WHEN THE VEHICLE IS:** \_\_\_\_\_  
☐ STOPPED ☐ ACCELERATING FROM STOP  
☐ MOVING ☐ DECELERATING ☒ DOESN'T MATTER

**WHEN THE VEHICLE TEMPERATURE IS:** \_\_\_\_\_  
☐ COLD ☐ NORMAL ☐ HOT ☒ DOESN'T MATTER

**Fig. 17E**

**-BRAKE SYSTEM:**

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOMS.

1. CONVENTIONAL BRAKE SYSTEM.
2. ANTI LOCK BRAKE SYSTEM.
3. BOTH SYSTEMS.

1

2

3

BACK

HELP

**Fig. 18A**

CONVENTIONAL BRAKE SYSTEM

TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBES WHAT YOU ARE NOTICING.

☐ BRAKE PEDAL SEEMS TO PULSATE.
 ☐ PULLS RIGHT OR LEFT WHEN STOPPING.
 ☐ GRINDING NOISE WHEN STOPPING.
 ☐ SQUEAKS WHEN STOPPING.
 ☐ BRAKE PEDAL FADES (GOES TO THE FLOOR)
 ☐ BRAKE PEDAL SEEMS LOW.
 ☐ BRAKING EFFORT SEEMS EXCESSIVE.
 ☒ BRAKE LIGHT ON.
 ☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

**Fig. 18B**

STEERING AND SUSPENSION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. STEERING

2. SUSPENSION

1

2

BACK

HELP

STEERING INFORMATION:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

☐ STEERING WHEEL SHAKES WHILE DRIVING.

☐ VEHICLE PULLS RIGHT WHILE DRIVING.

☐ VEHICLE PULLS LEFT WHILE DRIVING.

☐ VEHICLE WANDERS LEFT OR RIGHT WHILE DRIVING.

☐ STEERING WHEEL IS OFF-CENTER.

☐ TIRES ARE WEARING ABNORMALLY.

☐ STEERING WHEEL SEEMS HARD TO TURN.

☐ POWER STEERING MAKES ABNORMAL NOISES.

☐ NONE IF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 19B

STEERING AND SUSPENSION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. STEERING

2. SUSPENSION

1

2

BACK

HELP

Fig. 19A

**SUSPENSION INFORMATION:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

☐ FRONT END BOUNCES EXCESSIVELY WHILE DRIVING

☐ REAR END BOUNCES EXCESSIVELY WHILE DRIVING.

☐ RIGHT FRONT SEEMS TO SAG.

☐ LEFT FRONT SEEMS TO SAG.

☐ RIGHT REAR SEEMS TO SAG.

☐ LEFT REAR SEEMS TO SAG.

☐ SUSPENSION NOISE OVER BUMPS.

☐ SUSPENSION SEEMS TOO SOFT.

☐ AUTO RIDE CONTROL LIGHT COMES ON.

☐ NONE OF THE ABOVE SYMPTOMS.

OK
BACK
HELP

**Fig. 19C**

**WHEN DOES IT HAPPEN:** \_\_\_\_\_

WHEN DO YOU NOTICE THE SYMPTOM(S).  
TOUCH THE APPROPRIATE BOX OR BOXES BELOW.

---

**WHEN THE VEHICLE IS:** \_\_\_\_\_

☐ ACCELERATING   ☐ SLOWING DOWN OR STOPPING  
☐ TURNING   ☐ TURNING ON PAVED ROADS  
☐ TURNING ON DIRT OR ROUGH ROADS  
☒ DOESN'T MATTER

---

**WHEN THE VEHICLES SPEED IS:** \_\_\_\_\_

☐ NOT MOVING   ☐ 0 TO 10 MPH  
☐ 10 TO 35 MPH   ☐ 35 TO 50 MPH  
☐ OVER 55 MPH

---

**Fig. 19D**

## MANUALLY OPERATED COMPONENTS

TOUCH THE APPROPRIATE BOX OR BOXES THAT  
BEST DESCRIBE THE AREA OF THE SYMPTOM..

## 1. POWER ACCESSORIES.

- IF THE ABOVE DOESN'T SEEM TO DESCRIBE THE PROBLEM, TOUCH "BACK" THEN SELECT "POWER ACCESSORIES" AND LOOK THERE FOR A BETTER DESCRIPTION.

HELP

**HELP**

**Fig. 20B**

**POWER ACCESSORIES INFORMATION:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

☐ KEYLESS ENTRY / ALARM SYSTEM.

☐ LIGHTED MIRRORS / POWER MIRRORS.

☐ AUTO DIM HEADLAMPS / INTERIOR LIGHTING.

☐ POWER SEAT ADJUSTMENT/COMFORT.

☐ AUDIO SYSTEMS / POWER ANTENNA.

☐ POWER WINDOWS / LOCKS / SUNROOF.

☐ CRUISE CONTROL.

IF THE ABOVE DOESN'T SEEM TO DESCRIBE THE PROBLEM, TOUCH "BACK" THEN SELECT "ELECTRICALLY OPERATED COMPONENTS" AND LOOK THERE FOR A BETTER DESCRIPTION.

**Fig. 20C**

**LETS NARROW THE SEARCH:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE PROBLEM.

☐ SCRATCHED

☐ MISSING

☐ LEAKS AIR

☐ LEAKS WATER

☐ TORN

☐ BLEMISHED

☐ LIFT MECHANISM

☐ FOLD MECHANISM

☐ WON'T LOCK / UNLOCK

☐ OUT OF ADJUSTMENT

☐ BROKEN

☐ CRACKED

☐ WARPED

☐ LOOSE

☐ COLOR FADES

☐ PEELING

☐ PITTED

☐ DOESN'T WORK

☐ NONE OF THE ABOVE

**Fig. 20D**



**WHEN DOES IT HAPPEN:**

WHEN DO YOU NOTICE THE SYMPTOM(S).  
TOUCH THE APPROPRIATE BOX OR BOXES BELOW.

☐ WHEN I TURN THE SWITCH ON OR OFF.

☐ WHEN THE VEHICLE HITS A BUMP.

☐ WHEN I TRY TO MAKE AN ADJUSTMENT.

☐ WHEN I ADJUST THE VOLUME.

☐ WHEN I START THE VEHICLE.

☐ WHEN I TRY TO SET THE CONTROL.

☐ WHEN I OPEN A DRIVER-SIDE DOOR.

☐ WHEN I OPEN A PASSENGER SIDE DOOR.

☐ WHEN I OPEN THE TRUNK / HOOD.

☐ WHEN I TURN THE HEAD LIGHTS ON.

☐ NONE OF THE ABOVE.

OK

BACK

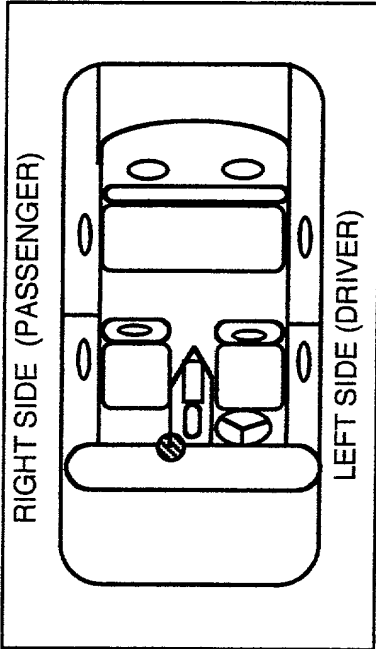
HELP

**SELECT THE AREA IT IS LOCATED IN:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT  
BEST DESCRIBES WHERE THE PROBLEM  
IS LOCATED.

PLEASE TOUCH THE AREA WHERE THE SYMPTOMS OCCURS:

RIGHT SIDE (PASSENGER)



LEFT SIDE (DRIVER)

CLEAR DOT

OK

BACK

HELP

Fig. 20E

Fig. 20F

OTHER SERVICES AVAILABLE:

PLEASE SELECT THE CATEGORY OF THE PROBLEM YOU ARE OBSERVING WITH YOUR VEHICLE.

1. SCHEDULED MAINTENANCE.

2. UNSCHEDULED MAINTENANCE:

3. VEHICLE EXTERIOR.

4. VEHICLE INTERIOR.

5. SPECIAL ORDER PARTS/ RECALL NOTICE.

6. NEW OR USED CAR INTERNAL.

7. GENERAL PROBLEMS.

1

2

3

4

5

6

7

BACK

HELP

SCHEDULED MAINTENANCE:

YOUR VEHICLE'S CLOSEST SCHEDULED MAINTENANCE SERVICE HAS BEEN HIGHLIGHTED BELOW. PLEASE CHOOSE THE SERVICE YOU WISH TO HAVE PERFORMED BY TOUCHING THE APPROPRIATE MILEAGE. REFER TO YOUR MAINTENANCE SCHEDULE BOOKLET TO VIEW THE ITEMS PERFORMED IN THE SERVICE. IF YOU WISH TO CHANGE ANY PART OF THE SERVICE, SELECT HELP THEN #3

YOUR ENTERED MILEAGE IS: 12,500

☒ 12,000 MILES

☐ 18,000 MILES

☐ 6,000 MILES

☐ 24,000 MILES

OK

BACK

HELP

Fig. 21B

Fig. 21A

UNSCHEDULED MAINTENANCE:

TOUCH THE BOX OR BOXES NEXT TO THE APPROPRIATE SERVICES YOU WOULD LIKE PERFORMED. PLEASE REFER TO YOUR VEHICLE'S MAINTENANCE SCHEDULE BOOKLET FOR MORE INFORMATION OF THE SERVICES BELOW. OR YOU CAN REQUEST A MAINTENANCE SHEET FROM ONE OF THE ASSISTANTS ON THE SERVICE AISLE.

<input type="checkbox"/> EVERY 3000 MILES:	\$ 35.00
<input type="checkbox"/> EVERY 6000 MILES:	\$ 55.00
<input type="checkbox"/> EVERY 15,000 MILES:	\$ 85.00
<input type="checkbox"/> EVERY 30,000 MILES:	\$100.00
<input type="checkbox"/> EVERY 60,000 MILES:	\$125.00
<input type="checkbox"/> VEHICLE ALIGNMENT, 2 WHEEL:	\$ 35.00
<input type="checkbox"/> VEHICLE ALIGNMENT, 4 WHEEL:	\$ 75.00
<input type="checkbox"/> VEHICLE INSPECTION:	\$35.00

OK

BACK

HELP

VEHICLE EXTERIOR:

THIS SECTION INCLUDES THE VEHICLE'S BODY AND RELATED EXTERIOR PARTS. PLEASE TOUCH THE APPROPRIATE AREA IN WHICH THE PROBLEM IS OCCURRING.

<input type="radio"/> BODY PANELS FIT AND FINISH.
<input type="radio"/> EXTERIOR SEALS (DOORS, SUNROOF, TRUNK, ETC.)
<input type="radio"/> PLASTIC TRIM AND MOLDINGS.
<input type="radio"/> EXTERIOR MIRRORS, HANDLES, LOCKS AND BUTTONS.
<input type="radio"/> WHEELS OR SPARE WHEEL CARRIERS.
<input type="radio"/> PAINT AND / OR CLEARCOAT.
<input type="radio"/> REMOVEABLE HARDTOP / SOFT TOP CONVERTABLE.
<input type="radio"/> WINDSHIELD OR WINDOWS.
<input checked="" type="radio"/> EXTERIOR LIGHTS OR LIGHT COVERS.

OK

BACK

HELP

Fig. 21D

UNSCHEDULED MAINTENANCE:

TOUCH THE BOX OR BOXES NEXT TO THE APPROPRIATE SERVICES YOU WOULD LIKE PERFORMED. PLEASE REFER TO YOUR VEHICLE'S MAINTENANCE SCHEDULE BOOKLET FOR MORE INFORMATION OF THE SERVICES BELOW. OR YOU CAN REQUEST A MAINTENANCE SHEET FROM ONE OF THE ASSISTANTS ON THE SERVICE AISLE.

<input type="checkbox"/> EVERY 3000 MILES:	\$ 35.00
<input type="checkbox"/> EVERY 6000 MILES:	\$ 55.00
<input type="checkbox"/> EVERY 15,000 MILES:	\$ 85.00
<input type="checkbox"/> EVERY 30,000 MILES:	\$100.00
<input type="checkbox"/> EVERY 60,000 MILES:	\$125.00
<input type="checkbox"/> VEHICLE ALIGNMENT, 2 WHEEL:	\$ 35.00
<input type="checkbox"/> VEHICLE ALIGNMENT, 4 WHEEL:	\$ 75.00
<input type="checkbox"/> VEHICLE INSPECTION:	\$35.00

OK

BACK

HELP

Fig. 21C

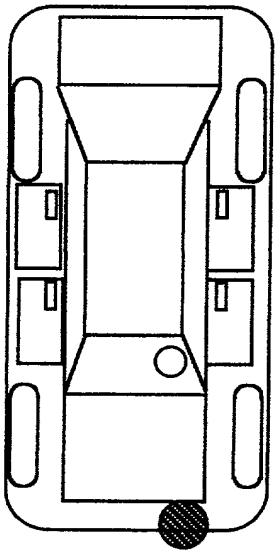
VEHICLE EXTERIOR:

TOUCH THE LOCATION ON THE GRAPHIC BELOW TO SHOW THE LOCATION OF THE PROBLEM.

TOP VIEW

RIGHT SIDE (PASSENGER)

LEFT SIDE (DRIVER)



CLEAR DOT

OK

BACK

HELP

Fig. 21F

PROBLEM LOCATIONS:

TO HELP NARROW THE SEARCH, TOUCH THE WORD OR WORDS THAT BEST DESCRIBE WHERE THE PROBLEM IS LOCATED.

EXTERIOR LOCATIONS:

☒ EXTERIOR LIGHT.

☐ EXTERIOR LIGHT COVER

OK

BACK

HELP

Fig. 21E

**VEHICLE INTERIOR:**

THIS SECTION INCLUDES THE VEHICLE'S INTERIOR AND TRUNK AREA. PLEASE TOUCH THE APPROPRIATE NUMBER IN WHICH THE PROBLEM IS OCCURRING.

- ☐ SEATS OR SEAT CUSHIONS.
- ☐ CARPETING OR FLOOR MATS.
- ☐ DOOR PANELS OR INTERIOR SIDE PANELS.
- ☐ INTERIOR TRIM OR HEADLINER.
- ☐ DASH PANEL OR INSTRUMENT PANEL.
- ☐ INTERIOR KNOBS, HANDLES AND LATCHES.
- ☐ INTERIOR SWITCHES, BUTTONS, LOCKS AND SLIDES.
- ☐ WINDSHIELD OR WINDOWS.
- ☒ INTERIOR LIGHTING, INSTRUMENT PANEL LIGHTING.

**Fig. 21G**

**PROBLEM LOCATION:**

TO HELP NARROW THE SEARCH, TOUCH THE WORD OR WORDS THAT BEST DESCRIBE WHERE THE PROBLEM IS LOCATED.

**INTERIOR LOCATIONS:**

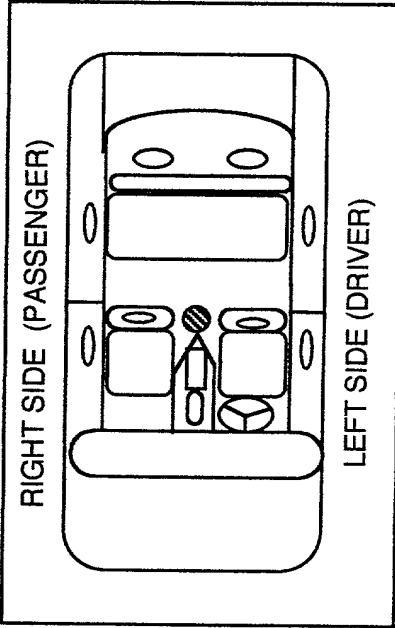
- ☒ INTERIOR LIGHT.
- ☐ INTERIOR INSTRUMENT LIGHT.

**Fig. 21H**

VEHICLE INTERIOR:

TOUCH THE LOCATION ON THE GRAPHIC BELOW TO SHOW THE LOCATION OF THE PROBLEM.

RIGHT SIDE (PASSENGER)



LEFT SIDE (DRIVER)

CLEAR DOT

OKBACKHELP

PROBLEM DESCRIPTION:

TOUCH THE BOX OR BOXES NEXT TO THE WORD OR PHRASE THAT BEST DESCRIBES THE PROBLEM.

☐ SCRATCHED

☐ MISSING

☐ LEAKS AIR

☐ LEAKS WATER

☐ TORN

☐ BLEMISHED

☐ LIFT MECHANISM

☐ FOLD MECHANISM

☐ WON'T LOCK / UNLOCK

☐ OUT OF ADJUSTMENT

☐ BROKEN

☐ CRACKED

☐ WARPED

☐ LOOSE

☐ COLOR FADES

☐ PEELING

☐ PITTED

☐ DOESN'T WORK

☐ NONE OF THE ABOVE

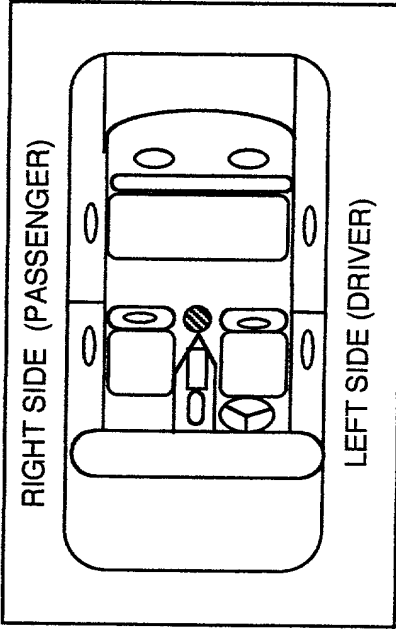
OKBACKHELP

Fig. 21J

VEHICLE INTERIOR:

TOUCH THE LOCATION ON THE GRAPHIC BELOW TO SHOW THE LOCATION OF THE PROBLEM.

RIGHT SIDE (PASSENGER)



LEFT SIDE (DRIVER)

CLEAR DOT

OKBACKHELP

PROBLEM DESCRIPTION:

TOUCH THE BOX OR BOXES NEXT TO THE WORD OR PHRASE THAT BEST DESCRIBES THE PROBLEM.

☐ SCRATCHED

☐ MISSING

☐ LEAKS AIR

☐ LEAKS WATER

☐ TORN

☐ BLEMISHED

☐ LIFT MECHANISM

☐ FOLD MECHANISM

☐ WON'T LOCK / UNLOCK

☐ OUT OF ADJUSTMENT

☐ BROKEN

☐ CRACKED

☐ WARPED

☐ LOOSE

☐ COLOR FADES

☐ PEELING

☐ PITTED

☐ DOESN'T WORK

☐ NONE OF THE ABOVE

OKBACKHELP

Fig. 21I

SPECIAL ORDER / RECALL NOTICE:

IF YOU HAVE RECEIVED NOTIFICATION REGARDING AN ORDERED PART, TOUCH ONE. IF YOU HAVE RECEIVED A MANUFACTURER'S RECALL NOTICE REGARDING YOUR VEHICLE, TOUCH TWO. PLEASE PLACE THE NOTICE ON THE DASHBOARD AREA OF YOUR VEHICLE FOR THE SERVICE TECHNICIAN.

☐ SPECIAL ORDER PARTS NOTICE.

☐ MANUFACTURER'S RECALL NOTICE.

OK

BACK

HELP

**Fig. 21K**

NEW / USED CAR INTERNAL:

IF YOU HAVE A "NEW CAR INTERNAL REPAIR ORDER", PRESS ONE. IF YOU HAVE A "USED CAR INTERNAL REPAIR ORDER", PRESS TWO. PLEASE PLACE THE REPAIR ORDER ON THE DASHBOARD OF YOUR VEHICLE.

☐ NEW CAR INTERNAL.

☐ USED CAR INTERNAL.

OK

BACK

HELP

**Fig. 21L**

THIS SECTION OFFERS YOU A GENERAL DESCRIPTION OF THE VEHICLE'S PROBLEM AND PROVIDES THE TECHNICIAN WITH VITAL INFORMATION TO BEGIN A SUCCESSFUL REPAIR. IF YOU CAN'T FIND YOUR VEHICLE'S SYMPTOM IN THE MAIN MENU, PROCEED TO THE NEXT SCREEN BY TOUCHING **OK** BELOW, OR SEE YOUR SERVICE ADVISOR.

THERE ARE FOUR MAIN SENSES YOU HAVE THAT INDICATE A PROBLEM WITH YOUR VEHICLE. PLEASE CHOOSE THE MOST APPROPRIATE SENSE BELOW.

1. THINGS YOU **SEE**.

2. THINGS YOU **HEAR**.

3. THINGS YOU **SMELL**.

4. THINGS YOU **FEEL**.

1

2

3

4

BACK

HELP

**THINGS YOU SEE:**

TOUCH THE BOX NEXT TO THE WORD OR PHRASE THAT BEST DESCRIBE THE PROBLEM.

☐ SCRATCHED

☐ MISSING

☐ LEAKS AIR

☐ LEAKS WATER

☐ TORN

☐ BLEMISHED

☐ LIFT MECHANISM

☐ FOLD MECHANISM

☐ WONT LOCK / UNLOCK

☐ OUT OF ADJUSTMENT

☐ BROKEN

☐ CRACKED

☐ WARPED

☐ LOOSE

☐ COLOR FADES

☐ PEELING

☐ PITTED

☐ DOESN'T WORK

☐ NONE OF THE ABOVE

OK

BACK

HELP

Fig. 21M

Fig. 21N



**THINGS YOU SMELL:**

TOUCH THE BOX NEXT TO THE WORD OR PHRASE THAT BEST DESCRIBE THE PROBLEM.

☐ BURNING SMELL  
☐ MUSTY ODOR  
☐ RAW FUEL SMELL  
☐ ROTTEN-EGG SMELL  
☐ EXHAUST LEAK  
☐ ENGINE COOLANT SMELL  
☐ BURNING BRAKE SMELL  
☐ BURNING CLUTCH SMELL  
☐ BURNING RUBBER SMELL  
☐ NONE OF THE ABOVE SYMPTOMS.

**Fig. 21P**

**THINGS YOU HEAR:**

TOUCH THE BOX NEXT TO THE WORD OR PHRASE THAT BEST DESCRIBE THE PROBLEM.

☐ SQUEAK  
☐ RATTLE  
☐ WHISTLE  
☐ HUM  
☐ BUZZ  
☐ CHIRP  
☐ SQUEAL  
☐ CLUNK  
☐ TAP  
☐ CLICK GRIND  
☐ GROWL  
☐ KNOCK  
☐ METAL CLANG  
☐ RUMBLE  
☐ NONE OF THE ABOVE

**Fig. 21O**

**THINGS YOU FEEL:**

LISTED BELOW ARE EXAMPLES OF VIBRATIONS COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBE THE VIBRATION(S) YOU ARE FEELING.

<input type="checkbox"/> SHAKING	<input type="checkbox"/> SHUDDER
<input type="checkbox"/> THUMPING	<input type="checkbox"/> PULSATION
<input type="checkbox"/> TREMBLING	<input type="checkbox"/> MOAN
<input type="checkbox"/> BOOM	<input type="checkbox"/> ROUGHNESS
<input type="checkbox"/> BUZZING	<input type="checkbox"/> TINGLING
<input type="checkbox"/> CLUNK	<input type="checkbox"/> RUMBLE
<input type="checkbox"/> CHATTER	<input type="checkbox"/> SHIMMY
	<input type="checkbox"/> NONE OF THE ABOVE

OK BACK HELP

**WHEN DOES IT HAPPEN:**

WHEN DO YOU NOTICE THE SYMPTOMS ? TOUCH THE APPROPRIATE BOX OR BOXES.

**WHEN THE VEHICLE IS:**

☐ ACCELERATING   ☐ SLOWING DOWN OR STOPPING  
☐ TURNING ON PAVED ROADS  
☐ TURNING ON DIRT ROADS  
☒ DOESN'T MATTER

**WHEN THE VEHICLES SPEED IS:**

☒ NOT MOVING   ☐ 0 TO 10 MPH  
☐ 10 TO 35 MPH   ☐ 35 TO 50 MPH  
☐ OVER 55 MPH

OK BACK HELP

Fig. 21R

**THINGS YOU FEEL:**

LISTED BELOW ARE EXAMPLES OF VIBRATIONS COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBE THE VIBRATION(S) YOU ARE FEELING.

<input type="checkbox"/> SHAKING	<input type="checkbox"/> SHUDDER
<input type="checkbox"/> THUMPING	<input type="checkbox"/> PULSATION
<input type="checkbox"/> TREMBLING	<input type="checkbox"/> MOAN
<input type="checkbox"/> BOOM	<input type="checkbox"/> ROUGHNESS
<input type="checkbox"/> BUZZING	<input type="checkbox"/> TINGLING
<input type="checkbox"/> CLUNK	<input type="checkbox"/> RUMBLE
<input type="checkbox"/> CHATTER	<input type="checkbox"/> SHIMMY
	<input type="checkbox"/> NONE OF THE ABOVE

OK BACK HELP

Fig. 21Q

**WHERE IS IT COMING FROM:**

PLEASE INDICATE THE APPROPRIATE AREA THE NOISE AND/OR VIBRATION SEEMS TO COME FROM. TOUCH THE LOCATION OF THE PROBLEM ON THE APPROPRIATE ILLUSTRATION.

INSIDE THE VEHICLE

RIGHT SIDE (PASSENGER)

LEFT SIDE (DRIVER)

UNDER THE VEHICLE

RIGHT SIDE (PASSENGER)

LEFT SIDE (DRIVER)

ON THE DASH

CLEAR DOT

CLEAR DOT

OK

BACK

HELP

Fig. 22A

**GENERAL QUESTIONS:**

AT JACK'S BMW WE ARE COMMITTED TO GIVING TO YOU THE BEST POSSIBLE SERVICE AND CORRECT REPAIR THE FIRST TIME. PLEASE HELP US BY ANSWERING THE FOLLOWING QUESTIONS. TOUCH THE APPROPRIATE BOX FOR EACH QUESTION.

Fig. 21S

**OTHER SYMPTOMS:** \_\_\_\_\_

PLEASE TELL US ABOUT THE SYMPTOMS.

**HOW OFTEN DOES THE SYMPTOM SHOW UP:**

☒ ALWAYS ☐ SOMETIMES ☐ RARELY

**WHEN DID THE PROBLEM BEGIN:**

☐ AFTER LAST REPAIR ☒ JUST STARTED

☐ A FEW DAYS AGO ☐ MORE THAN A WEEK

☐ A FEW WEEKS ☐ MORE THAN A MONTH AGO

**HAS THE PROBLEM BEEN WORKED ON BEFORE:**

☐ YES ☒ NO

**WHEN THE PROBLEM OCCURES, THE WEATHER IS:**

☐ HOT ☐ HUMID OR RAINY ☐ COOL

☐ FREEZING COLD ☒ DOESN'T MATTER

**RETURN PROBLEM:** \_\_\_\_\_

WHEN DO YOU NOTICE THE SYMPTOMS? TOUCH THE APPROPRIATE BOX OR BOXES.

**HOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON:**

☒ ONCE ☐ TWICE ☐ THREE TIMES AND OVER

**APPROXIMATELY HOW LONG AGO:**

☒ A FEW DAYS AGO ☐ A WEEK TO TWO WEEKS

☐ A FEW WEEKS ☐ MONTH AGO

**HAS THE PROBLEM BEEN LOOKED AT BY ANYONE OTHER THAN THIS SERVICES DEPARTMENT:**

☐ YES ☒ NO

OK BACK HELP

Fig. 22C

**OTHER SYMPTOMS:** \_\_\_\_\_

PLEASE TELL US ABOUT THE SYMPTOMS.

**HOW OFTEN DOES THE SYMPTOM SHOW UP:**

☒ ALWAYS ☐ SOMETIMES ☐ RARELY

**WHEN DID THE PROBLEM BEGIN:**

☐ AFTER LAST REPAIR ☒ JUST STARTED

☐ A FEW DAYS AGO ☐ MORE THAN A WEEK

☐ A FEW WEEKS ☐ MORE THAN A MONTH AGO

**HAS THE PROBLEM BEEN WORKED ON BEFORE:**

☐ YES ☒ NO

**WHEN THE PROBLEM OCCURES, THE WEATHER IS:**

☐ HOT ☐ HUMID OR RAINY ☐ COOL

☐ FREEZING COLD ☒ DOESN'T MATTER

**RETURN PROBLEM:** \_\_\_\_\_

WHEN DO YOU NOTICE THE SYMPTOMS? TOUCH THE APPROPRIATE BOX OR BOXES.

**HOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON:**

☒ ONCE ☐ TWICE ☐ THREE TIMES AND OVER

**APPROXIMATELY HOW LONG AGO:**

☒ A FEW DAYS AGO ☐ A WEEK TO TWO WEEKS

☐ A FEW WEEKS ☐ MONTH AGO

**HAS THE PROBLEM BEEN LOOKED AT BY ANYONE OTHER THAN THIS SERVICES DEPARTMENT:**

☐ YES ☒ NO

OK BACK HELP

Fig. 22B

ADDITIONAL PROBLEMS:

DO YOU HAVE ANY ADDITIONAL VEHICLE PROBLEMS OR MAINTENANCE REQUIREMENTS YOU WOULD LIKE TO HAVE ADDRESSED TODAY.

ADD SYMPTOM

DONEBACK

UNSCHEDULED SERVICES:

WOULD YOU LIKE ANY OF THE FOLLOWING UNSCHEDULED SERVICES TO BE PERFORMED.

☐ COMPUTERIZED VEHICLE ALIGNMENT  
(EXTENDS TIRE LIFE, IMPROVES HANDLING)

\$ 95.00

☐ LUBE, OIL AND FILTER CHANGE  
(EXTENDS THE LIFE OF THE ENGINE AND SUSPENSION PARTS)

\$ 45.00

☐ MINOR TUNE-UP  
(IMPROVES FUEL MILEAGE AND GIVES QUICKER STARTS)

\$ 50.00

☐ VEHICLE DETAIL AND WASH  
(IMPROVES YOUR VEHICLES APPEARANCE)

\$25.00

OKBACKHELP

Fig. 24

ADDITIONAL PROBLEMS:

DO YOU HAVE ANY ADDITIONAL VEHICLE PROBLEMS OR MAINTENANCE REQUIREMENTS YOU WOULD LIKE TO HAVE ADDRESSED TODAY.

ADD SYMPTOM

DONEBACK

UNSCHEDULED SERVICES:

WOULD YOU LIKE ANY OF THE FOLLOWING UNSCHEDULED SERVICES TO BE PERFORMED.

☐ COMPUTERIZED VEHICLE ALIGNMENT  
(EXTENDS TIRE LIFE, IMPROVES HANDLING)

\$ 95.00

☐ LUBE, OIL AND FILTER CHANGE  
(EXTENDS THE LIFE OF THE ENGINE AND SUSPENSION PARTS)

\$ 45.00

☐ MINOR TUNE-UP  
(IMPROVES FUEL MILEAGE AND GIVES QUICKER STARTS)

\$ 50.00

☐ VEHICLE DETAIL AND WASH  
(IMPROVES YOUR VEHICLES APPEARANCE)

\$25.00

OKBACKHELP

Fig. 23

**YOUR REPAIR ORDER:**

LOOK OVER THE FOLLOWING PANELS. THEY HOLD A SUMMARY OF THE INFORMATION YOU JUST ENTERED. IF THE DESCRIPTIONS DON'T LOOK CORRECT TOUCH THE MODIFY BUTTON, IF YOU WANT TO DELETE ONE TOUCH DELETE.

USE THE "PREVIOUS" AND "NEXT" BUTTONS, BELOW, TO VIEW ITEMS NOT SHOWN.

SCHEDULED MAINTENANCE

MODIFY

DELETE:

SCHEDULED MAINTENANCE AT: 12,000 MILES--

PREVIOUS

NEXT

OK

BACK

HELP

Fig. 25B

**YOUR REPAIR ORDER:**

LOOK OVER THE FOLLOWING PANELS. THEY HOLD A SUMMARY OF THE INFORMATION YOU JUST ENTERED. IF THE DESCRIPTIONS DON'T LOOK CORRECT TOUCH THE MODIFY BUTTON, IF YOU WANT TO DELETE ONE TOUCH DELETE.

USE THE "PREVIOUS" AND "NEXT" BUTTONS, BELOW, TO VIEW ITEMS NOT SHOWN.

VIBRATIONS

MODIFY

DELETE:

IT OCCURES WHEN THE VEHICLE IS: MOVING- MOST LIKELY OCCURS WHEN I AM: CRUISING AT A CONSTANT SPEED - AT WHAT SPEED(MPH): 20 TO 45 - SECTION B2 WAS CHOSEN FOR THE VEHICLE'S DASH. - HOW OFTEN DOES THE SYMPTOM SHOW UP: ALWAYS - WHEN DID THE PROBLEM BEGIN: JUST STARTED - HOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON: ONCE -- APPROXIMATELY HOW LONG AGO: A FEW DAYS AGO --

PREVIOUS

NEXT

OK

BACK

HELP

Fig. 25A

ESTIMATED REPAIR COSTS:

THE ESTIMATED MAINTENANCE COST IS AS FOLLOWS:

TOTAL: \$ 0.00

PLEASE KEEP IN MIND THE ACTUAL COSTS MAY BE HIGHER OR LOWER THAN THE ESTIMATE. WE WILL CONTACT YOU IF THE COST OF THE REPAIR IS HIGHER THAN THE ESTIMATE.

OKBACKHELP

Fig. 26

VEHICLE ESTIMATE AND PICK-UP TIME:

YOUR PERSONAL SERVICE ADVISOR IS: HE OR SHE WILL CONTACT YOU AND PROVIDE YOU WITH ANY ESTIMATED REPAIR COSTS AND PICK-UP TIME FOR YOUR VEHICLE. IF YOU PREFER AN APPROXIMATE COST AND PICK-UP TIME NOW, SEE YOUR SERVICE ADVISOR AFTER COMPLETING YOUR REPAIR ORDER. PLEASE CHOOSE YOUR OPTION BELOW.

☒ PLEASE CONTACT ME

☐ I WOULD LIKE TO SEE THE ADVISOR.

OKBACKHELP

Fig. 27

**PLEASE ACKNOWLEDGE THE FOLLOWING:**

PLEASE ACKNOWLEDGE THE FOLLOWING: I HEREBY AUTHORIZE THE REPAIR WORK HERE SET FORTH TO BE DONE ALONG WITH THE NECESSARY MATERIAL AND AGREE THAT(DEALER) IS NOT RESPONSIBLE FOR LOSS OR DAMAGE TO VEHICLE OR ARTICLES LEFT IN VEHICLE IN CASE OF FIRE, THEFT OR ANY OTHER CAUSE BEYOND YOUR CONTROL OR FOR ANY DELAYES CAUSED BY UNAVAILABILITY OF PARTS OR DELAYS IN PARTS SHIPMENTS BY THE SUPPLIER OR TRANSPORTER. I HEREBY GRANT YOU AND / OR YOUR EMPLOYEES PERMISSION TO OPERATE THE VEHICLE HEREIN DESCRIBED ON STREETS, HIGHWAYS OR ELSEWHERE FOR THE PURPOSE OF TESTING AND/ OR INSPECTION . AN EXPRESS MECHANIC'S LIEN IS HEREBY ACKNOWLEDGED ON VEHICLE TO SECURE THE AMOUNT OF REPAIRS THERETO. A STORAGE FEE OF NOT MORE THAN TEN DOLLARS PER DAY, BEGINING ON THE FORTH DAY, MAY BE CHARGED IF A MOTOR VEHICLE IS NOT REMOVED WITHIN THREE DAYS AFTER THE CUSTOMER IS NOTIFIED THAT REPAIRS HAVE BEEN COMPLETED, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, **TERMS:** STRICTLY CASH CHECK OR APPROVED CREDIT CARD.

**KEY DEPOSITING INSTRUCTIONS:**

PLEASE DEPOSIT YOUR VEHICLE'S KEYS IN THE ENVELOPE PROVIDED. TEAR OFF THE ATTACHED RECEIPT AND PUT THE ENVELOPE IN THE IDENTIFIED LOCKING RECEPTACLE.

OK

BACK

HELP

Fig. 29


**PLEASE ACKNOWLEDGE THE FOLLOWING:**

PLEASE ACKNOWLEDGE THE FOLLOWING: I HEREBY AUTHORIZE THE REPAIR WORK HERE SET FORTH TO BE DONE ALONG WITH THE NECESSARY MATERIAL AND AGREE THAT(DEALER) IS NOT RESPONSIBLE FOR LOSS OR DAMAGE TO VEHICLE OR ARTICLES LEFT IN VEHICLE IN CASE OF FIRE, THEFT OR ANY OTHER CAUSE BEYOND YOUR CONTROL OR FOR ANY DELAYES CAUSED BY UNAVAILABILITY OF PARTS OR DELAYS IN PARTS SHIPMENTS BY THE SUPPLIER OR TRANSPORTER. I HEREBY GRANT YOU AND / OR YOUR EMPLOYEES PERMISSION TO OPERATE THE VEHICLE HEREIN DESCRIBED ON STREETS, HIGHWAYS OR ELSEWHERE FOR THE PURPOSE OF TESTING AND/ OR INSPECTION . AN EXPRESS MECHANIC'S LIEN IS HEREBY ACKNOWLEDGED ON VEHICLE TO SECURE THE AMOUNT OF REPAIRS THERETO. A STORAGE FEE OF NOT MORE THAN TEN DOLLARS PER DAY, BEGINING ON THE FORTH DAY, MAY BE CHARGED IF A MOTOR VEHICLE IS NOT REMOVED WITHIN THREE DAYS AFTER THE CUSTOMER IS NOTIFIED THAT REPAIRS HAVE BEEN COMPLETED, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, **TERMS:** STRICTLY CASH CHECK OR APPROVED CREDIT CARD.

CUSTOMER ACKNOWLEDGES RECEIPT HEREOF:

PLEASE SIGN HERE:

ERASE SIGNATURE



OK

BACK

HELP

Fig. 28



**WAIT/ DROP OFF / LOANER SCREEN:**

PLEASE ANSWER THE FOLLOWING QUESTIONS  
SO WE CAN PREPARE FOR YOU.

**ARE YOU WAITING FOR YOUR VEHICLE:**

OYES ☒ NO

**WOULD YOU LIKE A LOANER VEHICLE:**

OYES ☒ NO

**WOULD YOU LIKE TO RECEIVE THE  
REPLACED PARTS:**

OYES ☒ NO

OK BACK HELP

**Fig. 30**

A FINISHED REPAIR ORDER:

THANK YOU FOR CHOOSING  
TO ASSIST IN YOUR SERVICE NEEDS. BUSINESS  
CARDS ARE AVAILABLE AT THE DESK. IF YOU  
HAVE ANY QUESTIONS, PLEASE CALL AT

SEND DATA

OK

HELP

A FINISHED REPAIR ORDER:

THANK YOU FOR CHOOSING  
TO ASSIST IN YOUR SERVICE NEEDS. BUSINESS  
CARDS ARE AVAILABLE AT THE DESK. IF YOU  
HAVE ANY QUESTIONS, PLEASE CALL AT

DOWNLOAD COMPLETE

OK

HELP

51/54

Fig. 31A

Fig. 31B



ADVANCED  
SERVICE  
TECHNOLOGIES  
INCORPORATED

## REPAIR ESTIMATE

CONTROL NO. 553  
DATE: 7/13/98  
TIME: 7:54:15 PM

VEHICLE: DESCRIPTION: *DODGE RAM 350, FORREST GREEN, 2001* MILEAGE: 33225 VIN: 123456789 PLATE: BRT-1234

CUSTOMER: NAME: JOHN DOE ADDRESS: 1234 HIS WAY ST.  
PHONE #1: (303)333-4444 PHONE #2: (303)333-4445  
CITY/ST/ZIP: ANYTOWN, USA 12345

### ANTI-LOCK BRAKE SYSTEM

ANTI-LOCK BRAKE LIGHT IS ON CONSTANTLY.  
ANTI-LOCK BRAKE LIGHT IS ON INTERMITTENTLY.  
WHEN I BRAKE UNDER THE FOLLOWING CONDITIONS: NORMAL BRAKING ON DRY PAVED ROADS.  
WHEN MY VEHICLE'S ENGINE TEMPERATURE READS: NORMAL  
HOW OFTEN DOES THE SYMPTOM SHOW UP: ALWAYS  
WHEN DID THE PROBLEM BEGIN: JUST STARTED  
SHOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON: THREE TIMES AND OVER  
APPROXIMATELY HOW LONG AGO: A FEW DAYS AGO

### ELECTRICALLY OPERATED COMPONENTS

INTERIOR LIGHT(S)  
WARNING GUAGES OR LIGHTS.  
HORN OR CIGAR LIGHTER / POWER SOCKET.  
WHAT DID YOU NOTICE: CRACKED  
WHAT DID YOU NOTICE: WARPED  
WHAT DID YOU NOTICE: LOOSE  
WHEN I START THE VEHICLE.  
WHEN I TRY TO SET THE CONTROL.  
WHEN I OPEN A DRIVER-SIDE DOOR.  
WHEN I TURN THE HEAD LIGHTS ON.  
SECTION C3 WAS CHOSEN FOR THE ELECTRICAL PROBLEM LOCATION.  
HOW OFTEN DOES THE SYMPTOM SHOW UP: ALWAYS  
WHEN DID THE PROBLEM BEGIN: JUST STARTED  
HOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON: THREE TIMES AND OVER  
APPROXIMATELY HOW LONG AGO: A WEEK TO TWO WEEKS

(CONTINUED ON FIG. 32B)


(CONTINUED FROM FIG. 32A)

**STEERING SYSTEM**

VEHICLE PULLS RIGHT WHILE DRIVING.  
VEHICLE PULLS LEFT WHILE DRIVING  
VEHICLE WANDERS LEFT OR RIGHT WHILE DRIVING.

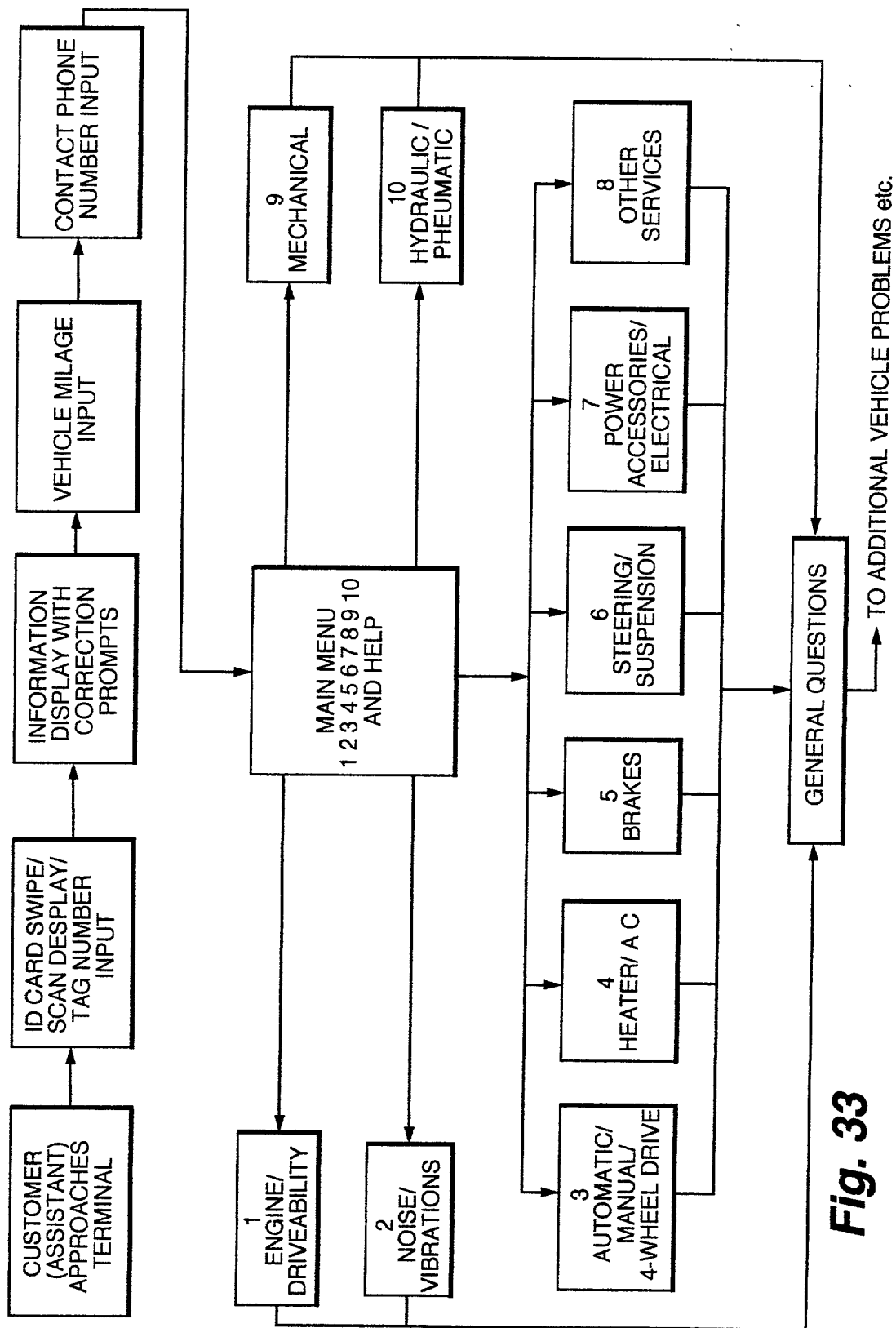
TOTAL PARTS: \_\_\_\_\_ TOTAL LABOR: \_\_\_\_\_ MATERIALS COST \_\_\_\_\_ TAX \_\_\_\_\_ GRAND TOTAL \_\_\_\_\_

**AUTHORIZATION:** I AUTHORIZE THE ABOVE WORK TO BE PERFORMED AND AGREE TO THE TERMS OF THIS REPAIR ORDER. FURTHERMORE, I RELEASE ANY AND ALL LIABILITY TO **RPM ENTERPRISES, INC.** ON THE ABOVE VEHICLE INCLUDING, BUT NOT LIMITED TO: DAMAGE, THEFT, FAILURE OF RELATED REPAIR ITEMS, AND EXPRESSED OR IMPLIED WARRANTY OF ALL INSTALLED PARTS.



SIGNATURE:

**Fig. 32B**



**Fig. 33**